

What is claimed is:

1 1. A method for a client, comprising:
2 first requesting a first content from a content provider;
3 providing a characteristic profile to the content provider indicating characteristics
4 of the client;
5 receiving a first reply from the content provider responsive to the first requesting,
6 the first reply including a query for a characteristic of the client;
7 second requesting the first content from the content provider, the second
8 requesting incorporating a query result for the query; and
9 receiving a second reply from the content provider responsive to the second
10 requesting, the second reply including the first content or portion thereof, wherein the
11 first content or portion thereof is determined based at least in part on the characteristic.

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13 2. The method of claim 1, further comprising:
14 third requesting a second content from the content provider, wherein the third
15 requesting automatically incorporates the query result for the query.

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17 3. The method of claim 1, wherein for content that is arranged in a
18 hierarchical structure, the method further comprising:
19 determining if the content provider wants the query result to be automatically
20 incorporated into a third requesting of second content from the content provider that is
21 lower in the hierarchical structure than the first content.

1 4. The method of claim 3, further comprising:
2 determining if the content provider is caching the query result, and if so,
3 determining if the query result has changed since the first requesting; and
4 wherein if the query result has not changed, said third request does not
5 incorporate the query result for the query.

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7 5. The method of claim 4, wherein if the query result has changed, said third
8 request automatically incorporates the query result for the query.

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10 6. The method of claim 2, further comprising:
11 determining if the content provider is caching the query result, and if so,
12 determining if the query result has changed since the first requesting; and
13 wherein if the query result has not changed, said third request does not
14 incorporate the query result for the query, and wherein if the query result has changed,
15 said third request automatically incorporates the query result for the query.

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17 7. The method of claim 1, further comprising:
18 storing the query result in a HyperText Transport Protocol (HTTP) request
19 header provided to the content provider.

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21 8. The method of claim 1, wherein the query is received in a HyperText
22 Transport Protocol (HTTP) response header provided by the content provider.

1 9. The method of claim 1, wherein requesting the content and receiving the
2 first reply is performed according to the Composite Capability/Preference Profiles
3 (CC/PP) protocol.

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5 10. The method of claim 1, wherein the characteristic profile includes an entry
6 indicating whether the client can be queried for an operational characteristic.

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8 11. The method of claim 10, wherein the characteristic profile is formatted as
9 a UAProf profile.

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11 12. The method of claim 1, wherein the first reply comprises a selected one of
12 the content or a frame-set for the content.

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14 13. The method of claim 1, wherein the characteristic is a selected one of
15 processor type, processor speed, processor mode, available memory, available
16 storage, or available network connectivity.

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18 14. The method of claim 1, wherein the characteristic is a selected one of
19 availability of: peer clients, a camera, a microphone, a text to speech converter, a
20 speech to text converter, a soft radio, a graphics processor.

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22 15. The method of claim 1, wherein the characteristic is availability of an
23 encryption processor.

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2 16. A method, comprising:
3 receiving from a client a first request for first content and a characteristic profile
4 indicating characteristics of the client;
5 providing a first response to the client lacking all of the requested first content,
6 but wherein the first response incorporates a query for a characteristic of the client;
7 receiving a second request for the first content, wherein the second request
8 incorporates a query result for the query; and
9 providing the first content to the client in accord with the query result.
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11 17. The method of claim 16, further comprising:
12 wherein the characteristic profile indicates the client may be queried for
13 characteristics not identified in the characteristic profile;
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15 18. The method of claim 16, wherein the characteristic reflects an operational
16 characteristic of the client.
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18 19. The method of claim 18, wherein the operational characteristic is a real-
19 time attribute which changes while the client is operating.
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21 20. The method of claim 18, wherein the operational characteristic is a
22 selected one of available power, available memory, processor type or processor speed.
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1 21. The method of claim 16, further comprising:

2 issuing a set-cookie command to the client to associate at least the first content
3 with a cookie, wherein the cookie indicates the query result will be cached for all content
4 associated with the cookie.

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6 22. A system comprising:

7 a content provider communicatively coupled with a client;
8 wherein the content provider is operative to perform receiving from the client a
9 first request for content, determining the client may be queried for characteristics,
10 providing a response to the client incorporating a query for a characteristic of the client,
11 receiving a second request for the first content incorporating a query result for the
12 query, and providing the first content to the client in accord with the query result; and
13 wherein the client is operative to perform parsing the response to determine the
14 query, determining the query result, and providing the query result to the content
15 provider in at least a second request for content.

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17 23. The system of claim 22, wherein the client and content provider utilize
18 HTTP to exchange data in accord with the CC/PP protocol.

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20 24. A system comprising:
21 a proxy for managing communication with a content provider, the proxy operable
22 to parse data received from a content provider to determine a query for a characteristic

1 of the system, and to provide a query result to the content provider incorporating the
2 characteristic of the system;

3 at least one agent for inspecting the system for various characteristics of the
4 system; and

5 a manager having an interface communicatively coupled with the proxy to allow
6 the proxy to direct the manger to dynamically instantiate an agent to determine the
7 query result responsive to the query.

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9 25. The system of claim 24, the system further comprising a memory for
10 storing directives for at least the manager, the directives including:

11 a first directive to store a copy of a default characteristic profile for the system
12 into the memory;

13 a second directive to identify an entry in the copy for which the agent is required
14 to determine a value;

15 a third directive to dynamically load the agent to determine the value;

16 a fourth directive to store the value in the copy of the default characteristics
17 profile.

18
19 26. An article comprising a machine-accessible media having associated data,
20 wherein the data, when accessed, results in a machine performing:

21 first requesting a first content from a content provider;

22 providing a characteristic profile to the content provider indicating characteristics
23 of the client;

1 receiving a first reply from the content provider responsive to the first requesting,
2 the first reply including a query for a characteristic of the client;
3 second requesting the first content from the content provider, the second
4 requesting incorporating a query result for the query; and
5 receiving a second reply from the content provider responsive to the second
6 requesting, the second reply including the first content, wherein the first content is
7 determined based at least in part on the characteristic.

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9 27. The article of claim 26 wherein the machine-accessible media further
10 includes data, when accessed, results in the machine performing:
11 determining the content is arranged in a hierarchical structure; and
12 determining if the content provider wants the query result to be automatically
13 incorporated into a third requesting of second content from the content provider that is
14 lower in the hierarchical structure than the first content.

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16 28. An article comprising a machine-accessible media having associated data,
17 wherein the data, when accessed, results in a machine performing:
18 receiving from a client a first request for first content and a characteristic profile
19 indicating characteristics of the client;
20 determining the client may be queried for characteristics not identified in the
21 characteristic profile;
22 providing a first response to the client lacking all of the requested first content,
23 but wherein the first response incorporates a query for a characteristic of the client;

receiving a second request for the first content, wherein the second request
incorporates a query result for the query; and
providing the first content to the client in accord with the query result.

29. The article of claim 28 wherein the machine-accessible media further
includes data, when accessed, results in the machine performing:
issuing a set-cookie command to the client to associate at least the first content
with a cookie, wherein the cookie indicates the query result will be cached for all content
associated with the cookie.